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GILA BEND POWER PARTNERS, LLC

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Arizona Corporation Commission DOCKETED

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February 27, 2013

Via Overnight Delivery

Arizona Corporation Commission Utilities Division Director 1200 West Washington Street Phoenix, Arizona 85007 Attention: Director

Re: <u>Self-Certification Letter –</u>

Arizona Corporation Commission – Decision #63552 as amended by Decision #69177 and 72189; Docket Control #L-00000V-00-0106 and Docket

Control #L-00000V-01-0109

Dear Sir or Madam:

Gila Bend Power Partners, LLC ("GBPP" or "Applicant") submits this self-certification letter pursuant to the above Decision Number for the Certificate of Environmental Compatibility ("CEC") for Applicant's project in Gila Bend, Arizona. The construction of the subject power generation station and site referenced in the CEC Decision has been delayed due to market conditions.

On or about December 5, 2006, the Arizona Corporation Commission issued Decision Number 69177 extending the expiration date of this CEC until February 7, 2011 (the "First Extension Order"), and the CEC was subsequently extended to February 7, 2018 pursuant to ACC Decision Number 72188 docketed February 15, 2011 (the "Second Extension Order"). The First Extension Order added nine additional conditions to the existing CEC. The Second Extension Order did not add additional environmental conditions or others appropriate for annual self certification. As it has in years past, GBPP is filing this self-certification letter addressing the original CEC conditions and will file an additional August letter addressing GBPP's compliance efforts as of June 30th with the CEC conditions contained in the First Extension Order.

The activities relating to the initial conditions established by the CEC document are as follows and reference numbers correspond to the conditions as numbered in the original CEC:

 Construction and operation of the power generation station will comply with applicable air and water pollution control standards and regulations, and with all applicable ordinances, master plans, and regulations of the State of Arizona, the County of Maricopa, the United States, and any other governmental entity having jurisdiction.

- 2. Applicant's CEC has been extended to February 7, 2018 pursuant to Commission Decision No. 72188 docketed February 15, 2011.
- 3. Not applicable at this time.
- 4. The Interconnect Agreement with the transmission provider will be submitted to the Arizona Corporation Commission when completed and signed.
- 5. GBPP is a member of the Western Electric Coordinating Council formerly known as the Western Systems Coordinating Council. The Reliability Management System ("RMS") generator agreement will be filed with the Commission as part of the control area operator's master RMS agreement.
- 6. Not applicable at this time.
- 7. Not applicable at this time.
- 8. The NOx emissions requirements for the project, as established by Maricopa County, Department of Environmental Quality, as a maximum, will not exceed 2.5 ppm.
- 9. The design for the project will meet HUD or EPA residential noise guidelines or OSHA worker safety standards.
- 10. The project substation and switchyard design is based on a breaker and one-half scheme.
- 11. GBPP has entered into a Development Agreement with the Town of Gila Bend encompassing this requirement.
- 12. GBPP's plant construction planning will encompass plans for the utilization of low profile structures, moderate stacks, neutral colors, compatible landscaping and low intensity directed lighting.
- 13. GBPP's plant design will be consistent with the land management plan submitted as Exhibit A-8 filed among the papers of Decision No. 63552. In addition, GBPP will utilize natural screening along the entire southern and western boundaries of the plant site.

Arizona Corporation Commission Utilities Division Director February 27, 2013 Page 3

- 14. GBPP identified Arizona institutions of higher education with whom to partner on research activities regarding salt cedar-resistant vegetation, and will commence same prior to initiation of construction.
- 15. GBPP has obtained a Certificate of Environmental Compatibility which meets this requirement, Decision Number 65886, which was extended to February 7, 2018 by Decision Number 72176.
- 16. The project design can accommodate two transmission lines emanating from the plant switchyard.
- 17. GBPP is a member of WECC and monitors industry changes, activities and best-practices. GBPP entered into an Encroachment Agreement with a solar generator in order to facilitate the connection of the solar generators plant to the grid. GBPP is also involved in the Gila Bend Transmission Initiative.
- 18. Not applicable at this time.

The items of the CEC conditions not addressed in the above Self-certification Letter are part of the overall project plan, and will be included in the plan as required by the CEC document.

Should you have any questions or comments, please contact the undersigned.

Regards,

GILA BEND POWER PARTNERS, LLC

By: Sammons Power Development, Inc., Its Managing Member

- -

Heather Kreager, President

Arizona Corporation Commission, Compliance Section Arizona Corporation Commission, Docket Control Center Via Overnight Delivery
Via Overnight Delivery

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CC:

Decision #63552

By:

GILA BEND POWER PARTNERS, LLC

5949 Sherry Lane, Suite1900 Dallas, Texas 75225-6553

Telephone: (214) 210-5000 Facsimile: (214) 210-5087

January 21, 2013

VIA OVERNIGHT DELIVERY

Arizona Corporation Commission Utilities Division 1200 West Washington Street Phoenix, Arizona 85007

Re: 10-YEAR TRANSMISSION PLAN-2013

Gentlemen:

Enclosed please find 13 copies of the 10-Year Transmission Plan–2013 for Gila Bend Power Partners, LLC. The project is on hold due to current market conditions, so the plan has not been revised since Gila Bend's prior submission.

If you need anything further, please let me know.

Yours truly,

HEATHER KREAGER

HK:lk

GILA BEND POWER PROJECT

2013 10-YEAR TRANSMISSION PLAN

Prepared for the:

ARIZONA CORPORATION COMMISSION UTILITY DIVISION

BY: GILA BEND POWER PARTNERS, LLC

Report on the Gila Bend Power Partners, LLC.'s Generation Project System Impact Study

Prepared For the
Industrial Power Technology
And
Palo Verde E & O Committee

By
James C. Hsu
Salt River Project

November 1, 2001

Version (C)

Gila Bend Power Partners Generation Project System Impact Study Report

I. Introduction

Industrial Power Technology (IPT), on behalf of the Gila Bend Power Partners, LLC (GBPP) has requested Salt River Project (SRP) to perform a system impact study that will assist GBPP in the determination of the Palo Verde transmission system and the WSCC interconnected system impact of interconnecting the proposed GBPP Generation Project with the another proposed Panda Gila River Generation Project's planned Gila River-Jojoba 500 kV double circuit lines. These double circuit 500 kV lines will be tied to the existing Hassayampa-Kyrene 500 kV line. Currently, GBPP has proposed to build a combined cycle power plant of 833 MW in addition to the 2080 MW of new generation power plant proposed by the Gila River Panda Project (Panda) in the same vicinity. In response to this request, SRP has carried out the study work accordingly, and documented the study results in this brief report.

For this analysis, the proposed size of the GBPP project was assumed to be 833 MW. Coincident with the development of the GBPP project, a separate generation proposal called the Gila River Panda Project (2080 MW) is also being developed and it will be interconnected to the Palo Verde transmission system via a double circuit 500kV line from the Gila River generation site to Jojoba, a new switchyard that is being developed to interconnect the two 500kV lines with the existing Palo Verde – Kyrene 500kV line. The GBPP project will interconnect with the system via a new, single circuit 500kV line to Watermelon substation, a new switchyard the GBPP plans to build, located approximately 2 miles from the Gila River Power facility. The Gila River – Jojoba 500kV lines will be looped into the Watermelon switchyard. SRP's system analysis assessed the system impact of both the Gila River Panda and GBPP generation projects on the interconnected WSCC system.

SRP's analysis focused on the capability of the Palo Verde area transmission system to deliver a total of 2913 MW of new generation from both proposed projects (GBPP and Gila River Panda) into the interconnected system. The scope of the study was to identify any significant system impacts that may be caused by interconnecting the GBPP generation project with the Jojoba-Gila River double circuit 500 kV lines, the Hassayampa-Kyrene 500 kV line, and their associated switchyards. This study did not identify any mitigation measures that may be required as a result of system impacts attributable to the GBPP Generation Project. Therefore, neither a preliminary plan of service nor a cost estimate for interconnecting the Proposed Generation Project with the existing and planned 500 kV transmission system was provided.

The purpose of this System Study was to assess the impact of the GBPP project on the Palo Verde transmission and the integrated WSCC EHV transmission system. The study is comprised of limited power flow and stability studies, but does not include any short circuit, post-transient power flow or subsynchronous resonance studies. Any conclusions presented from this System Impact Study represent the opinion of SRP and not necessarily the opinion of the Palo Verde Transmission System Engineering and Operating Committee.

The following two transmission configurations were assessed in this analysis:

Configuration 1:

The GBPP Project will be interconnected to the planned Jojoba-Gila River 500 double circuit lines at a location approximately 2 miles from the Gila River 500 kV switchyard (Watermelon substation). This transmission configuration assumed that the Gila River Generating Project would install a 500/230 kV transformer at their Gila River substation to accommodate an interconnection of the existing Liberty-Gila Bend 230 kV line.

Configuration 2:

Configuration 2 represents the same 500 kV transmission configuration as Configuration 1, however, the 500/230 kV transformer at the Gila River 500kV substation was not modeled.

II. Review of Panda System Development and Pertinent Study Results

Included in the "Report on the Preliminary Study For the Palo Verde Interconnection" and "Report on the Panda Generation Project Sensitivity Study', some technical study results pertinent to the Panda Generation Project and the impact assessment of its system development were documented in a number of different sections throughout these reports. It should be pointed out that these study results varied depending upon the system conditions, system models and the Panda's transmission network used in those studies. The following table summarizes the study results, associated information, and specific references from these reports.

New Generation Accommodated	Panda Interconnection To Palo Verde	Panda 500/230 KV Transformer	Transmission Constraint	Reference
4,850 MW (Including Pauda 1250 MW & PDE 550 MW GEN)	Panda Project Looping in & out of PV-KY line	Ne	Thermal and Stability	PV Interconnection Study Report Section.III.B2 (Pg.27) Exhbit.2
5,240 MW (Including Panda 1640 MW & PDE 550 MW GEN)	Building Jojoba-Panda 500 KV double circuit lines and Jojoba cutting into PV- Kyrene line	Yes (with 390 MW flow)	Thermal and Stability	Panda Project Seasitivity Study Report Section III.1&2 (Pg.4) Tables PF-7 & TS-15

These previous study results revealed the following observations:

- For the 2003 heavy summer condition with the addition of Palo Verde-Estrella line, "New Generation" in the amount of 4,850 MW can be accommodated by the Palo Verde transmission system without installation of a Panda 500/230 kV transformer.
- Approximately 390 MW increase in the Panda Gila River Generation Plant output can be dispatched if the Panda project is interconnected with the Arizona local 230 kV transmission system by installing a 500/230 kV transformer.
- The Palo Verde transmission thermal limits were constrained by the respective continuous rating of either the Hassayampa-N. Gila 500 kV line or the Hassayampa-Kyrene 500 kV line.
- 4. The Palo Verde stability limit was determined by a three-phase fault on the Palo Verde 500 kV bus and a subsequent loss of both Palo Verde-Westwing 500 kV lines.

As mentioned in the summary table above, the Panda sensitivity studies were performed based on the following assumptions:

- 1. The Panda Gila River Generation Project (Panda Gen) was the only project to interconnect with the Hassayampa-Kyrene 500 kV line.
- 2. The GBPP Generation Project was interconnected to the Hassayampa 500 kV Switchyard via a single circuit 500 kV line.
- 3. The generation output for the Panda Gen and GBPP projects were not maximized. The Panda Gen Project was dispatched in the ranges of 1250 MW to 1640 MW and PDE Gen Project was dispatched at 550 MW.

The current plan, as proposed by GBPP, is to interconnect with the Jojoba-Gila River 500 kV double circuit lines at an intersection about 2 miles north of the Gila River 500 kV Switchyard (Watermelon). Given these modifications in system representation, it was necessary to perform additional study work to assess the impact of these system modifications on the Palo Verde and the interconnected WSCC system with an emphasis on dispatching the maximum generation for both Panda Gen Project (2080 MW) and GBPP Generation Project (833 MW).

III. Conclusions

Based on the results of this impact study, the following was concluded:

The maximum generation that can be scheduled out of the Gila River vicinity to the
Arizona and California load centers is a function of the capability of some of the Palo
Verde transmission system components. This transmission capability is based on a thermal
limitations on either the Hassayampa-N. Gila line 500 kV line or the Hassayampa-Kyrene
500 kV line.

- a) The maximum GBPP generation that can be accommodated by the Configuration 1 transmission system (without Panda 500/230 kV transformer) is about 583 MW if the Panda Gila River generation is maximized at 2080 MW output.
- b) The maximum new GBPP generation can be increased to 683 MW for the Configuration 2 transmission system (with Panda 500/230 kV transformer) if the Panda generation was still at its maximum output of 2080 MW.
- The interconnection of the proposed GBPP Generation Project with the respective amount
 of power schedule noted in 1.a and 1.b above will not have any adverse impact on the Palo
 Verde Nuclear Plant, its associated transmission system, and the WSCC interconnected
 system.
- 3 The common corridor outage for a simultaneous loss of both Jojoba-Gila River double circuit 500 kV lines and a subsequent trip of combined maximum generation output (a total of 2911 MW) will not cause a stability problem. The interconnected transmission system can withstand such critical outage without causing wide spread cascading outages. The consequence of this double circuit outage is comparable to the result of a simultaneous trip of two Palo Verde generators. Both double contingencies are acceptable and meet the WSCC Performance Criteria Level C.
- 4. The stability performance resulting from a three-phase fault on the Palo Verde 500 kV bus and fault cleared by loss of both two Palo Verde-Westwing 500 kV lines became less severe due to power flow displacement for these two critical lines when more Panda and GBPP generation was dispatched at the Gila River location, which is further away from the Palo Verde vicinity.

IV. Discussion on Study Results

(A) Power Flow Impact

The following technical discussion is based on the various system conditions studied and demonstrate no adverse power flow impact on the Palo Verde and the Southwest interconnected transmission system due to the Gila River interconnection of the GBPP Generation Project.

1. Configuration 1 (Without Panda 500/230 kV Connection):

(See PF-TABLE 1)

Benchmark System (Without GBPP Project):

For base case conditions, that included accommodation of new generation of 4,650 MW by the Palo Verde transmission system, the heaviest loadings on both the Hassayampa-N. Gila and Jojoba-Kyrene 500 kV lines were occurred. They were reached at 100.5% and 100.4% of their continuous ratings, respectively. Neither N-1 contingency problems nor low system voltages were noted.

Post-GBPP System (With GBPP Project):

For base case conditions with 4,650 MW of new generation that included the power schedule of 833 MW of GBPP generation and 2080 MW of Panda Gila River generation to deliver to the Palo Verde transmission system, the heaviest loadings on both the Hassayampa-N. Gila and Jojoba-Kyrene 500 kV lines occurred. Flow on these lines reached 100.6% and 106.4% of their continuous ratings, respectively. A slight overload also occurred on the remaining Jojoba-Gila River Tap 500 kV line (101.1% of its emergency rating) for loss of one Jojoba-Gila River Tap 500 kV line.

Further studies indicated that these overloading problems could be overcome if the GBPP generation output was reduced to 583 MW. As a result, the loading on the Jojoba-Kyrene 500 kV line was reduced to 100.3% of its continuous rating. The remaining Gila River Tap-Jojoba 500 kV line loading was reduced to 91.5% of its emergency rating for a loss of one Gila River Tap-Jojoba 500 kV line.

1. Configuration 2 (With Panda 500/230 kV Connection):

(See PF-TABLE 2)

Benchmark System (Without GBPP Project):

For base case conditions, that included accommodation of new generation of 5,040 MW by the Palo Verde 500 kV and local 230 kV transmission systems, the heaviest loadings on both the Hassayampa-N. Gila and Jojoba-Kyrene 500 kV lines occurred. Flows on these lines reached 100.1% and 100.0% of their continuous ratings, respectively. No N-1 contingency problems or low system voltages were noted.

Post-GBPP System (With GBPP Project):

For base case conditions with 5,070 MW of new generation that included the power schedule of 833 MW of GBPP generation and 2080 MW of Panda Gila River generation to deliver to the Palo Verde 500 kV and local 230 kV transmission systems, the heaviest loadings on both the Hassayampa-N. Gila and Jojoba-Kyrene 500 kV lines occurred. They reached 100.2% and 104.6% of their continuous ratings, respectively. No overload occurred on the remaining Jojoba-Gila River Tap 500 kV line (84.1% of its emergency rating) for loss of one Jojoba-Gila River Tap 500 kV line. No voltage problems were detected for any N-1 contingencies.

Further studies indicated that this overloading problem could be overcome if the GBPP generation output was reduced to 683 MW. As a result, the loading on the Jojoba-Kyrene 500 kV line was reduced to 100.3% of its continuous rating. The remaining Gila River Tap-Jojoba 500 kV line loading was reduced to 79.0% of its emergency rating for a loss of one Gila River Tap-Jojoba 500 kV line.

(B) Transient Stability Impact

The stability analysis based on the following various system conditions indicated that no adverse impact on the Palo Verde plant stability and the integrated WSCC transmission system due to the interconnection of the GBPP Generation Project to the Palo Verde transmission system.

1. Configuration 1 (Without Panda 500/230 kV Connection):

(See TS-TABLE 1)

Benchmark System (Without GBPP Gen Project):

The following three N-2 contingency outages were established for stability benchmark performance using the pre-GBPP Project power flow limit case:

- (a) Three-phase fault at the Jojoba 500 kV bus with outage of two Jojoba-Gila River 500 kV lines and a subsequent trip Panda generation of 2080 MW
- (b) A simultaneous trip of two Palo Verde generators (loss of 2909 MW generation)
- (c) Three-phase fault at the Palo Verde 500 kV bus with outage of two Palo Verde-Westwing 500 kV lines

For the Pre-GBPP Project benchmark system, the stability results showed that all three N-2 contingency outages were stable and damped. The worst case was a simultaneous loss of two Palo Verde generators (loss of 2809 MW generation). This case resulted in a maximum transient voltage dip of 0.86 P.U. (22% deviation) at the Malin 500 kV bus. The next worst case was a three-phase fault at the Palo Verde 500 kV bus and fault cleared by the loss of two Palo Verde-Westwing 500 kV circuits. This case resulted in maximum voltage dips of 0.91 P.U. (15% deviation) and 0.92 P.U. (16% deviation) respectively, at the Palo Verde and Malin 500 kV buses. The least critical case was a three-phase fault at the Jojoba 500 kV bus with outage of two Jojoba-Gila River 500 kV circuits and a subsequent trip of 2080 MW of Panda generation. This case caused a maximum transient voltage dip of 0.95 P.U. (13% deviation) at the Malin 500 kV bus.

Post-GBPP(833 MW) Project System (With GBPP Project):

All three contingency outages simulated for the Pre-Project system were also tested in the Post-Project system. All stability results were stable and damped. The worst case was a three-phase fault at the Jojoba 500 kV bus with outage of two Jojoba-Gila River 500 kV circuits and a subsequent trip of about 2900 MW of combined Panda and GBPP generation. This case resulted in a maximum transient voltage dip of 0.81 P.U. (27% deviation) at the Malin 500 kV bus. The next worst case was a simultaneous loss of two Palo Verde generators (loss of 2809 MW generation). This case resulted in a maximum transient voltage dip of 0.86 P.U. (22% deviation) at the Malin 500 kV bus. The least critical case was a three-phase fault at the Palo Verde 500 kV bus with fault cleared by the loss of two Palo Verde-Westwing 500 kV circuits. This case resulted in maximum voltage dips of 0.95 P.U. (11% deviation) and 0.98 P.U. (10% deviation) respectively, at the Palo Verde and Malin 500 kV buses.

2. Configuration 2 (With Panda 500/230 kV Connection):

(See TS-TABLE 2)

Benchmark System (Without GBPP Project):

The following three N-2 contingency outages were established for stability benchmark performance using the pre-GBPP Project power flow limit case:

- (a) Three-phase fault at the Jojoba 500 kV bus with outage of two Jojoba-Gila River 500 kV lines and a subsequent trip Panda generation of 1560 MW
- (b) A simultaneous trip of two Palo Verde generators (loss of 2809 MW generation)
- (c) Three-phase fault at the Palo Verde 500 kV bus with outage of two Palo Verde-Westwing 500 kV lines

For the Pre-GBPP Project benchmark system, the stability results showed that all three N-2 contingency outages were stable and damped. The worst case was a simultaneous loss of two Palo Verde generators (loss of 2809 MW generation). This case resulted in a maximum transient voltage dip of 0.86 P.U. (22% deviation) at the Malin 500 kV bus. The next worst case was a three-phase fault at the Palo Verde 500 kV bus and fault cleared by the loss of two Palo Verde-Westwing 500 kV circuits. This case resulted in maximum voltage dips of 0.95 P.U. (11% deviation) and 0.98 P.U. (10% deviation) respectively, at the Palo Verde and Malin 500 kV buses. The least critical case was a three-phase fault at the Jojoba 500 kV bus with outage of two Jojoba-Gila River 500 kV circuits and a subsequent trip of 1560 MW of Panda generation. This case caused a maximum transient voltage dip of 0.98 P.U. (13% deviation) at the Malin 500 kV bus.

Post-GBPP(833 MW) Project System (With GBPP Project):

All three contingency outages simulated for the Pre-Project system were also tested in the Post-Project system. All stability results were stable and damped. The worst case was a simultaneous loss of two Palo Verde generators (loss of 2809 MW). This case resulted in a maximum transient voltage dip of 0.86 P.U. (22% deviation) at the Malin 500 kV bus. The next worst case was a three-phase fault at the Jojoba 500 kV bus with outage of two Jojoba-Gila River 500 kV circuits and a subsequent trip of about 2393 MW of combined Panda and GBPP generations. This case caused a maximum transient voltage dip of 0.90 P.U. (18% deviation) at the Malin 500 kV bus. The least critical case was a three-phase fault at the Palo Verde 500 kV bus with fault cleared by the loss of two Palo Verde-Westwing 500 kV circuits. This case resulted in maximum voltage dips of 0.95 P.U. (11% deviation) and 0.98 P.U. (10% deviation) respectively, at the Palo Verde and Malin 500 kV buses.

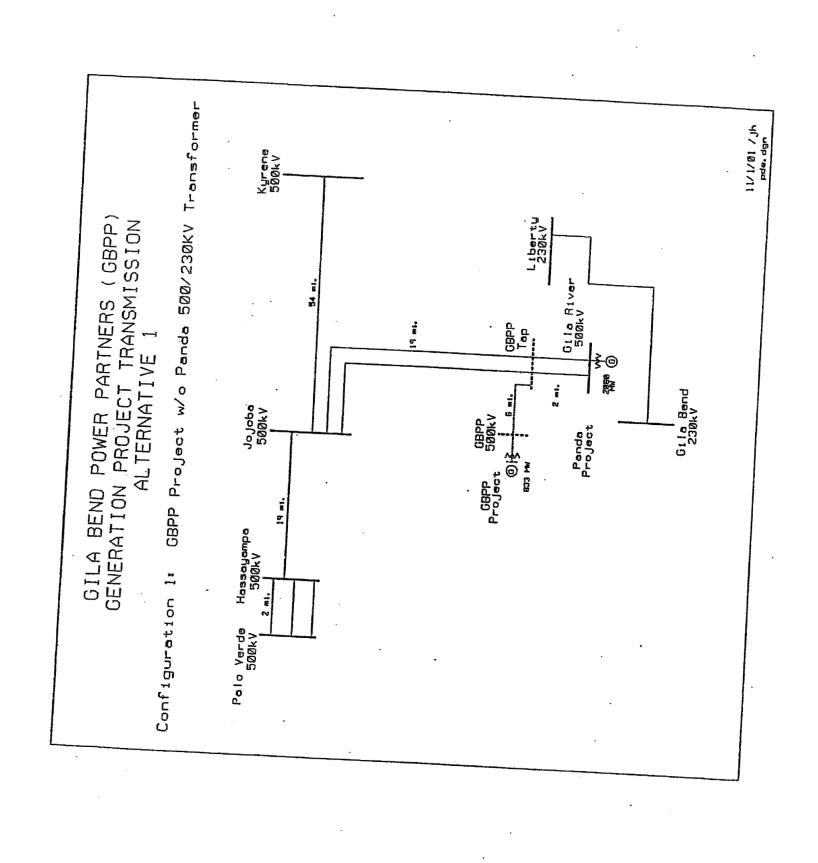
V. Exhibit

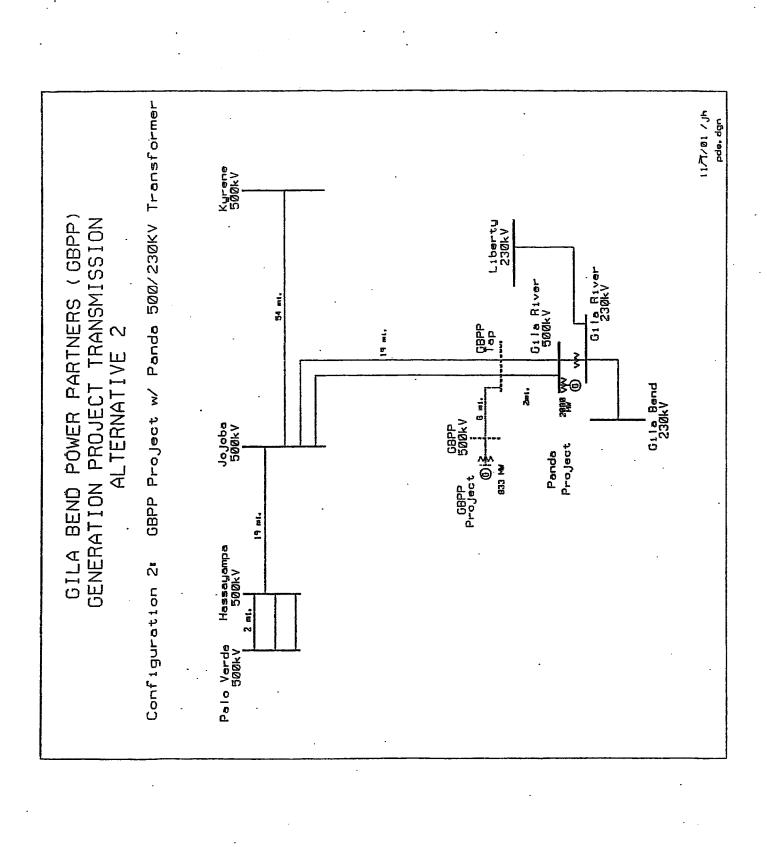
Exhibit 1 shows a one-line system diagram of transmission alternatives associated with the GBPP interconnection.

VI. Summary Tables of Study Results

(The attached tables summarize the study results)

- 1. PF-Table 1: Power Flow Impact With And Without GBPP (833 MW) Project (Without the Panda Gila River 500/230 KV Transformer)
- 2. TS-Table1: Stability Impact With And Without GBPP (833 MW) Project (Without the Panda Gila River 500/230 KV Transformer)
- 3. PF-Table 2: Power Flow Impact With And Without GBPP (833 MW) Project (With the Panda Gila River 500/230 KV Transformer)
- 2. TS-Table 2: Stability Impact With And Without GBPP (833 MW) Project (With the Panda Gila River 500/230 KV Transformer)





PF-TABLE 1
POWER FLOW IMPACT WITH AND WITHOUT THE GBPP(833MW) GEN PROJECT (WITHOUT THE PANDA GILA RIVER 500/230 KV TRANSFORMER)

COMMENTS		NO PROBLEM	NO PROBLEM	NO PROBLEM	NO PROBLEM	COMMENTS		NO PROBLEM	NO PROBLEM	NO PROBLEM			IN THE REPORT OF THE PARTY OF T	NO PROBLEM
KYR 230KV (PU) 1.01	5% MAX 1.01	1,00	0,99	0.98	1,01	230KV (PU) 1.01	10.1	9.	0.99	0.97	1.00	1,01	1.01	1.00
PPK 230KV (PU) 1.03	6% MAX 1.03	1.02	1.01	1.00	1,03	230KV (PU) 1.03	1.03	1.02	1.03	1,00	1,03	1,03	1,03	1.03
PV. EST (MW) 1162	(AMP) 2000 2521 1346 67,30%	1586 62.90%	500	1892 75,10%	1348 53.50%	PV. EST (MW) 1154	(AMP) 1314 65.70%	1549 61,40%	FU0	1892 75.10%	1316 62.20%	1128	1285 64.20%	1286 51.02%
GILA RV. JOJOBA1 (MW) 1009	(AMP) 2100 3150 1114 55.10%	1118 35.50%	1122 35.60%	1102 35,00%	2238 71,10%	GILA RV- IOJOBA#1 (MW)	(AMP) 1988 75.80%	1582 50.50%	1695 50.60%	1577 50,10%		1308	1434 88.80%	2894 91.50%
JOJOBA ICYR (MW) 1784	(AMP) 2000 2521 2521 (00)(00)	2262 89,70%	2397 95,10%	OCT.	2008 79.70%	JOJOBA KYR (MW) 1884	(AMP)	2376 84.30%	2509 99.50%	5	2129 84.50%	1792		2007 79.80%
PV. WWG#2 (MW)	(AMP) 3000 3200 1676 1676	2706 84.60%	2113 66.00%	2330 72,80%	1676 52,40%	FV. WWG#2 (MW) 1489	(AMP) 1632 54,40%	2637 82.40%	2060 64.40%	2328 72.80%	1634 51,10%	1440	1578	1580 49.40%
PV. WWG#1 (MW) 1528	(AMP) 3000 3200 1676 66,70%	770	2113 66,00%	2330 72,80%	1676 52,40%	PV- WWG#1 (MW) 1480	(AMP) 1632 54.40%	700	2060 64,40%	2328 72.80%	1634 51.10%	1440	.1578 52.60%	1680 49.40%
PV. DV (MW) 1341	(AMP) 1800 2430 1477 77.70%	1607 66,10%	1557 64.10%	1617 86.60%	1477 60.80%	PV- DV (MW) 1343	(AMP) 1479 77.80%	1605 66.10%	1557 64.10%	1631 66.60%	1479 80.80%	1330	1466 77,10%	1465 60.30%
PV. N.G. (MW)	(AMP) 1400 1890 (1000)	1483 78.50%	1458 77.20%	1496 79.20%	1407 74.40%	PV. N,G. (MW) 1265	(AMP)	1483 78.50%	1458 77,20%	1506 79.70%	1409 74,60%	1257		1400
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NDAYAATAN EKIRALERIK W) (MW)	FACILITY RATING CONTINUOUS RATING EMERGENCY RATING BASE CASE FLOW % OF CONTINUOUS RATING	ON I AGE CASE FLOW ONE PALO VERDE-WWG OUT % OF EMERGENCY RATING	PALO VERDÉ-EBTRELLA OUT % DF EMERGENCY RATING	JOJOBA-KYRENE OUT % OF EMERGENCY RATING	ONE JOJOB- GILA RIVER OUT % OF EMERGENCY RATING	ENJAMENTALIANIA WWW. (WWW.)	BASE CASE PLOW % OF CONTINUOUS RATING	OUTAGE CASE FLOW ONE PALO VERDE-WWG OUT % OF EMERGENCY RATING	PALO VERDE-ESTRELLA OUT % OF EMERGENCY RATING	JOJOBA-KYRENE OUT % OF EMERGENCY RATING	ONE JOJOB- GILA RIVER OUT % OF EMERGENCY RATING		MASE CASE FLOW(IN AMP) % OF CONTINUOUS RATING	ONE JOJOB- GILA RIVER OUT % OF EMERGENCY RATING

TS-TABLE 1

STABILITY IMPACT WITH AND WITHOUT THE GBPP(833 MW) GENERATION PROJECT (WITHOUT THE PANDA GILA RIVER 500/230 KV TRANSFORMER)

	MANAME OF TREET RESTRICTED TO					POWER F	POWER FLOW (MW)						STABILIT	STABILITY RESULTS
CASE NO.	CASE DESCRIPTION	SCIT PLOW	EOR Flow	FLOW	GBPP GEN	PANDA	PVNG	PVNG	NEW	PV NEW TOT	PANDA	PV500	ŀ	
WZDOZU	W200165918WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW		W100324	THE STREET		题2000期			MANA HEOTH	Water to		The STATE OF THE	MICALIDAE	COMMENTS AUTHORITIES AND AUTHORITIES
STAB-1	3 PH FLT @ JOJOBA BOOKV BUS L/O TWO JOJOBA-GILA RIVER (TRIP PANDA GENERATION OF 2080 MW)						•					1,03 3% Dlp	0.95 13% Dip	STABLE & DAMPED
STAB-2	L/O TWO PALO VERDE UNITS (TRIP A TOTAL OF 2808 MW GEN)											1.04	0.86	STABLE & DAMPED
STAB-3	3 PH PLT @ PV 600 KV BUS L/O TWO PV-WWG	•			٠							2% DIP	22% DIP	
							•			-		0.81 15% Dip	0.92 16% Dip	STABLE & DAMPED
	APPLICATION OF THE CONTRACT	i i i i i i i i i i i i i i i i i i i				POWER FLOW (MW)	OW (MW)	2					STABILITY	STABILITY RESULTS
CASE NO.	CASE DEBCRIPTION	SCIT FLOW	EOR Flow	COL	GBPP	PANDA GEN	PVNG	PVNG	NEW	PV /HSP	PANDA 9.07,002	PVS00	MASOO	
ADDED	NO ADDITIONAL NEW GEN.											100	1,10,1	COMMENTS
	(2011) Signatur (2013) (ASEGASE SECTION (2012)			KAZOBARA		NZOROWANIA N		NEW PROPERTY.	2400000					
STAB-1	3 PH FLT @ JOJOBA GORV) BUS L/O TWO JOJOBA-GILA RIVER (TRIP PDE & PANDA GENERATION A TOTAL OF 2011 MW)		-									1.03 3% Olp	0.81 27% Dip	STABLE & DAMPED
STAB-2	L/O TWO PALO VERDE UNITS (TRIP A TOTAL OF 2808 MW GEN)						•					1.04	0.86	STABLE & DAMPED
STAB-3	3 PH FLT @ PV 500 KV BUS L/O TWO PV-WWG												0,98	STABLE & DAMPED
													10% Dip	

PF-TABLE 2 POWER FLOW IMPACT WITH AND WITHOUT THE GBPP(833MW) GEN PROJECT

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/ TRANSFORMER
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COMMENTS	NAMES OF STREET	NO PROBLEM	NG PROBLEM	NO PROBLEM	NO PROBLEM	COMMENTS	EXORUBEDINO UNITEXTONUE	NO PROBLEM	NO PROBLEM	NO PROBLEM	NO PROBLEM		N.OTTHERWAY	NO PROBLEM
230KV (PU) 1.00	5% MAX 1.00	1.00	0.99	0.97	1.00	KYR 230KV (PU) 1.00	4.00	1.00	0.99	0.97	1.00	1,01	1.01	1.01
PPK 230KV (PU) 1.02	5% MAX 1.02	1.02	1.01	1,00	1,02	PPK 230KV (PU) 1.02	1.02	1.02	1.01	1.00	1,02	1.03	1.03	1.0g
FV. EST (MW)	(AMP) 2000 2521 1361 68.20%	1598 63.30%	50	1870 74.20%	1358 53,80%	PV. (MVV)	(AMP) 1322 66.10%	1547 61,40%	OUT	1845 73.20%	1317 62.20%	1141	1300 65.00%	1294 51.40%
GILA RV. JOJOBA1 (MW) 808	(AMP) 2100 3150 884 42.80%	872 27.70%	866 27.50%	793 25.20%	1781 55.50%	GILA RV. JOJOBA# (MW) 1213	(AMP) 1348 64.10%	1324 42.00%	1321 41.90%	1243 39.50%	2646 84.01%	1143	1265 60.30%	2489 79.00%
JOJOBA KYR (WW) 1772	(AMP) 2000 2521 2521 7000	2238	2377 94.30%	7700	1969 78,90%	JOJOBA KYR (MW)	(AMP)	2323 92,10%	2453 97.30%	100	2078 62.40%	1793	10002 N	1993 79.10%
PV. WWG#2 (MVV)	(AMP) 3000 3200 1675 55.70%	2707 84.80%	2105 65.80%	2274 71.10%	. 1668 52.10%	PV- WWG#2 (MW) 1486	(AMP) 1630 54.30%	2616 81,70%	2043 63.90%	2251 70.30%	1621 50,70%	1463	1604 53.50%	1696 49.90%
PV. WWG#1 (MW) 1518	(AMP) 3000 3200 1675 55.70%	چ	2105 65.80%	2274 71.10%	1668 52.10%	PV- WWG#1 (WW) 1486	(AMP) 1630 54.30%	TU0	2043 63.90%	2251	1621 50,70%	1463	1804 53.50%	1596 49,90%
PV. DV (MW) 1336	(AMP) 1900 2430 1471 77.40%	1583 65.10%	1636 63,20%	1586 65,30%	1469 60.50%	PV. DV (MW) 1336	(AMP) 1472 77.50%	1594 65.60%	1546 63.60%	1606 68,00%	1489 60,50%	1333	1468 77.20%	1486 60,30%
PV. N.G. (MVV) 1269	(AMF) 1400 1890 1890 1000	1467 77.80%	1444 76.40%	1474 78.00%	.1400 74.10%	PV- N,G, (MV) 1259	(AMP)	i473 78.00%	1449 76.70%	1486 78.60%	1400 74.10%	1257		1398 74,00%
PRESENTATION (MAY)					-	MEDERAL MAN (MAN)				-		ALEODOMINA GREEKHAIRZOBOTARISTERIETERI OZDANIA		·
CASE DESCRIPTION WITH GUNESTER FOR THE CONTROLL OF THE CONTROL	FACILITY RATING CONTINUOUS RATING EMERGENCY RATING BASE CASE FLOW(AMP) W OF CONTINUOUS RATING	ONE PALO VERDE-WWG OUT	PALO VERDE-ESTRELLA OUT % OF EMERGENCY RATING	JOJOBA-KYRENE OUT % OF EMERGENCY RATING	ONG JOJOB• GILA RIVER OUT % OF EMERGENCY RATING	WITH GERRIGEN GROUE CHEST MAN WEIGHT (MVV) BASE CASE FLOW	BASE CASE FLOW % OF CONTINUOUS RATING OFFICE OF OFFICE OFFI	ONE PALO VERDE-WWG OUT % OF EMERGENCY RATING	PALO VERDE-ESTRELLA OUT % OF EMERGENCY RATING	JOJOBA-KYRENG OUT % OF EMERGENCY RATING	ONE JOJOB- GILA RIVER OUT % OF EMERGENCY RATING	BASE CASE (IN MW)	BASE CASE FLOW(IN AMP) % OF CONTINUOUS RATING	ONE JOJOB, GILA RIVER OUT % OF EMERGENCY RATING
BENCH NARK 2003HS PDE-03		ALT A	ALT B	ALTC	ALT D	2003HS- PDE-04		ALT A	ALT B	ALT C	ALT D	PDE-04R		ALY D

TS-TABLE 2

STABILITY IMPACT WITH AND WITHOUT THE GBPP(833 MW) GENERATION PROJECT (WITH THE PANDA GILA RIVER 500/230 KV TRANSFORMER)

	UNVIOLEGITETETETETETETETETETETETETETETETETETET					POWER FLOW (MW)	(WW) MO						STABILLI	STABILITY RESULTS
CASE NO.	CASE DESCRIPTION	SGIT FLOW	EOR FLOW	COI PLOW	GEN	PANDA GEN	PVNG GEN	PVNG MARG	NEW Gen	PV INEW TOT	PANDA 500/230	PV500 (P.U.)	MA500 (P.U.)	COMMENTS
MZDOJIIE	N 2003 N STATE OF THE SECOND PROPERTY OF THE SECOND (2003 HS-PDE-03)								Metagora					
STAB-1	3 PH FLT @ JOJOBA 600KV BUS LO TWO JOJOBA-GILA RIVER (TRIP PANDA GENERATION OF 1660 MW; 3 UNITS OUT OF TOTAL4)											1,03 3% Dip	0.98 10% 701	STABLE & DAMPED
STAB-2	L/O TWO PALO VERDE UNITS (TRIP A TOTAL OF 2809 MW GEN)				•							1,04	0,86	STABLE & DAMPED
STAB-3	3 PH FLT @ PV 500 KV BUS L/O TWO PV-WWG											2% DIP 0.95	22% DIP 0.98	STABLE & DAMPED
		-										11% Dlp	10% Cip	
	WERVITHIER GREGENIER OF FEMALES					POWER FLOW (MW)	OW (MWV)	3			-		STABILIT	STABILITY RESULTS
CASE NO.	CASE DESCRIPTION	SCIT FLOW	EOR	COI	GEPP	PANDA GEN	PVNG	FVNG	N EW	PV MSP TOT	PANDA 500/230	PV500	MA500	COMMENTA
ADDED	NO ADDITIONAL, NEW GEN.													
E ZODZEJE	自2003日多與問題用時間和自己的意義的自己的影響的 (2003HS-PDE-04)		NEON BENTA	W. F. Connection					E507.0210					ocolonia esta de como de como de esta de esta de como de como de los desentes de marca de como de como de como
STAB-1	3 PH FLT @ JOJOBA 500KV BUS L/O TWO JOJOBA-GILA RIVER (TRIP PDE=833MW & PANDA=1680 MW; A TOTAL OF 2393 MW GEN)											1,03 3% Dlp	0.90 18% Dlp	STABLE & DAMPED
STAB-2	L/O TWO PALO VERDE UNITS (TRIP A TOTAL OF 2808 MW GEN)											1.04 2% Dio	0.86 Univ	STABLE & DAMPED
STAB-3	3 PH FLT @ PV 500 KV BUB L/O TWO PV-WWG			•				-				_	0.98 10% Dip	STABLE & DAMPED

